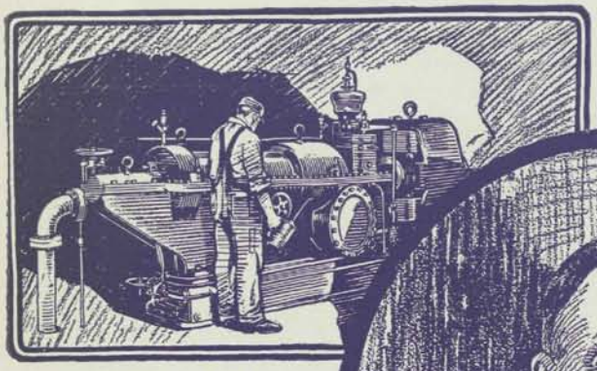
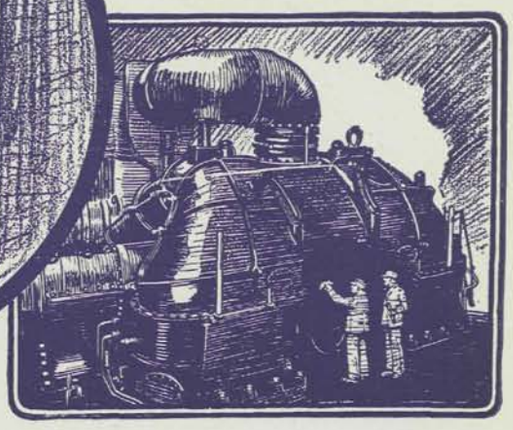


1898, 300 kv-a. Unit

Beginning with what would now be called the tiniest sort of a unit, a turbine which had a normal rating of 400 hp. at 3600 rpm., Westinghouse has developed turbine construction to a point where three cylinder, two stage, turbines are now in service developing 100,000 hp. And a most significant fact about this development is that practically every step in this progress has been a step forward.



1921, 70,000 kv-a. Unit

Francis Hodgkinson

DURING the last twenty-five years power generation practice has been revolutionized. The steam turbine has definitely displaced the reciprocating engine as the standard prime mover in large generating equipments. And Francis Hodgkinson has had more to do with this achievement than any other one individual.

Mr. Hodgkinson came to this country along with the Westinghouse Licenses under the Parsons patents, in 1896, upon the recommendation of the inventor himself. Since that time practically every commercial steam turbine Westinghouse has built has been designed and built by him and his able associates.

In this quarter-century of steam-turbine development inventive genius has been paralleled throughout by practical level-headedness. There are few cases in engineering history where the record is writ as clearly and impressively as this. There can be nothing but credit for the engineer who puts his errors underfoot and rises upon them, and most of the world's greatest achievements have been so reached. The World also honors progress that is surefooted and far-visioned, such as the development of steam turbines under Mr. Hodgkinson's direction.

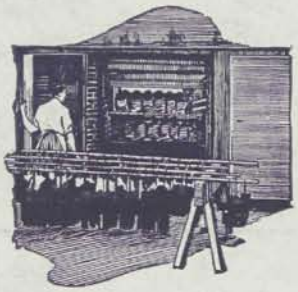
Many inventions of tremendous value in steam turbine practice have been devised and perfected by him and his co-workers. Among the more important of these are the construction, in 1907, of the first low-pressure turbine to be built in America, and in 1911, of the first Bleeder type of turbine; the perfection, in company with H. E. Longwell, of the water-seal gland; a balancing machine for turbine rotors that is almost superhumanly sensitive; a trouble-proof method of supporting turbine cylinders; and a very superior process for affixing turbine blades to rotor and cylinder.

One of the fundamental Westinghouse policies is insistence upon the uttermost in engineering. The observance of this policy in form and in spirit has provided genuine opportunities for many men of remarkable engineering gifts, one of the most notable of whom is the man whose name appears as the title of this article, Francis Hodgkinson.

Westinghouse

W

WESTINGHOUSE ELECTRIC



What Is Water Japan?

JAPAN—not the country but a metal-coating varnish—and your morning bottle of milk. Totally unlike, yet associated!

Ordinary japan consists of a tough, rubbery, tar-like "base" and a highly inflammable "solvent." The solvent dilutes the base so that the metal may be coated with it easily. The presence of the solvent involves considerable fire risk, especially in the baking oven.

Milk is a watery fluid containing suspended particles of butter fat, so small that one needs the ultra-microscope to detect them. An insoluble substance held permanently in suspension in a liquid in this manner is in "colloidal suspension."

The principle of colloidal suspension as demonstrated in milk was applied by the Research Laboratories of the General Electric Company to develop Water Japan. In this compound the particles of japan base are colloidally suspended in water. The fire risk vanishes.

So the analysis of milk has pointed the way to a safe japan. Again Nature serves industry.

Connected with the common things around us are many principles which may be applied to the uses of industry with revolutionary results. As Hamlet said, "There are more things in Heaven and earth, Horatio, than are dreamt of in your philosophy."

General Electric Company

General Office Schenectady, N. Y.

95-479HD